Completed Pollution Prevention Project Case Study

United States Department of Energy
Office of Environmental Management
Fact Sheet

Reuse and Recycling of Gamma Ray Detector Housings

Los Alamos National Laboratory

Original Problem

The Physics Division used 204 gamma ray detectors for approximately ten years on a project seeking evidence of gamma ray emissions from cosmic sources at high energies. At the end of the project, LANL had no use for the gamma ray detectors and their housings, also called "schmoos", or the cabling connecting them to the data collection system. The schmoos were scattered across the top of a mesa.

The Project Solution

Through the Laboratory Education Equipment Gift Program, CalTech accepted the schmoos for researching cosmic rays. CalTech paid to have the schmoos shipped to southern California, but there was no charge for the schmoos themselves.

Value of Improvement

Since the schmoos were not disposed of as waste, approximately $150,000 and 200 cubic meters of landfill space were saved. About 20 miles worth of piping and cabling that had connected the schmoos to the data collection system, four tons of lead shielding, and 400 wooden skids were removed and recycled during the project. All of the items were removed by hand to minimize the disruption of the beautiful mesa top. Since the removal of all of these items, the site has been restored to its original, pristine condition.

Lifecycle Waste Reduction	
Lifecycle Waste Reduction	>200 m^3
Commencement Date	2001
Project Useful Life (Years)	One-time

DOE Monetary Benefits	
Total Project Cost	No cost to LANL
Lifecycle Savings	~$150,000
Return on Investment	NA

Benefits At-A-Glance

- LANL saved over $150,000 in disposal costs by finding ways to reuse or recycle surplus equipment.
- Over 200 cubic meters of metal, 20 miles of cabling, 4 tons of lead, and 400 wooden skids were reused or recycled.
- CalTech received the equipment for just the cost of shipping, whereas each new schmoo would have cost them approximately $1200.

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Summary Data	
Priority Area:	Waste Minimization Projects
Project Type:	Reuse / Recycling
Total Project Cost:	No cost to LANL
Lifecycle Savings:	~$150,000
Implementing Groups:	LANSCE and P-23
Benefiting Groups:	LANSCE and P-23
Useful Life Years:	One-time
Return on Investment:	NA
Lifecycle Waste Reduction:	>200 cubic meters
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